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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,534	06/05/2007	Xiaodong Li	612408010US1	4954

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PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

EXAMINER	
SEKUL, MARIA LYNN	

ART UNIT	PAPER NUMBER
4124	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.**	**Applicant(s)**
	10/583,534	LI ET AL.
	Examiner	**Art Unit**
	MARIA L. SEKUL	4124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 June 2007_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-21_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,2,5-8,10-15 and 17-21_ is/are rejected.

7)☒ Claim(s) _3,4,9,16_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _16 June 2006_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. **Figures 1-5** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed is directed to a signal for wireless transmission which is considered a transitory signal. Transitory signals are not considered a process, machine, manufacture, or composition of matter, and therefore, is not patentable subject matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1, 2, 5, 11, 13, 14, 15, 17, 18, 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **van Nee (US Patent No. 6,175,550)** in view of **Miyoshi (US Patent No. 7,372,909)**.

As to **claim 1**, van Nee discloses a method:

"utilizing a specified number of subcarriers to construct a channel with a particular bandwidth" (scalable OFDM system that adjusts number of carriers for the desired transmission rate, **col. 3, lines 22-27**);

"utilizing subchannels that include groups of subcarriers" (this was well known in the art at the time the invention was made that subchannels can comprise one or more subcarriers);

"providing a fixed time-domain signal structure, including symbol length" (transmission has a time structure, **Fig. 2, col. 6, lines 41-47**);

"maintaining a substantially constant ratio between a sampling frequency and a size of FFT (Fast Fourier Transform) and IFFT (Inverse Fast Fourier Transform) or a fixed spacing between adjacent subcarriers" (increasing the number of subcarriers for a constant sampling rate will increase the number of carriers while keeping the carrier spacing fixed, **Fig. 3, col. 6, lines 51-54**);

"adding or subtracting some of the subcarriers or subchannels to scale the channel and achieve a required bandwidth" (scalable OFDM system with a transmitter and receiver that adjust number of carriers to meet the desired transmission rate, **col. 3, lines 53-58; col. 6, lines 51-57**); and

Van Nee does not explicitly teach "a core-band, substantially centered at an operating center frequency of the different communication schemes, is utilized for radio control and operation signaling, where the core-band is substantially not wider than a smallest possible operating channel bandwidth of the system".

Miyoshi teaches a control channel (core band) composed of one subcarrier with the remaining subcarriers making up the data channel. Because the control channel can consist of just one subcarrier, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system. Additionally, the control channel is located at the center frequency of the transmit band of the data channel (**Fig. 4, col. 2, line 64** through **col. 3, line 11**).

Miyoshi and van Nee are analogous art in that they both pertain to multi-carrier transmission. It would have been obvious to one skilled in the art at the time the invention was made to use the control channel as taught in Miyoshi with the process in van Nee being that it speeds up switching between the control channel and the data channel as stated in Miyoshi, col. 1, lines 61-65.

As to **claim 2**, van Nee in view of Miyoshi discloses all of claim 1.

van Nee further discloses the signal is:

“transmitted by a mobile station in a multi-cell, multi-base-station environment; a multi-carrier code division multiple access (MC-CDMA) or an orthogonal frequency division multiple access (OFDMA)” (scalable OFDM system, **Fig. 1, col. 3, line 66** through **col. 4, line 17**); and

“utilized with downlink, uplink, or both, where a duplexing technique is either Time Division Duplexing (TDD) or Frequency Division Duplexing (FDD)” (it was well known in the art at the time the invention was made that either TDD or FDD could be used on the uplink and/or downlink).

As to **claim 5**, van Nee discloses all of claim 1 and further discloses:

"the sampling frequency is a multiple of the sampling frequency of the fundamental range and the corresponding FFT length is multiplied by a substantially same factor as the sampling frequency is multiplied by, to maintain time duration of the OFDM symbol structure; the FFT length is maintained and the OFDM symbol duration is shortened accordingly; or the FFT length is increased and the OFDM symbol duration is shortened accordingly" (the symbol duration is modified to double the signal bandwidth while not modifying the FFT length, **col. 3, lines 48-52**); and

"wherein the width of the core-band is less than or equal to a smallest bandwidth in the fundamental range" (the control channel is composed of one carrier and the data channel uses the remaining subcarriers for data, **Fig. 4, line 28-383**, the fundamental range being a designated range after division of the entire range).

As to **claim 11**, van Nee discloses a transceiver comprising:

"an analog-to-digital converter for signal sampling"(**Fig. 4** depicting an OFDM receiver with an A/D component) ;

"a Fast Fourier Transform and Inverse Fast Fourier Transform processor (FFT/IFFT), wherein a substantially constant ratio is maintained between a sampling frequency and a size of the FFT/IFFT" (**Fig 3,4** depict the IFFT and FFT components of an OFDM transmitter and receiver, and the bandwidth can be varied in the scalable OFDM system by changing various parameters other than the sampling frequency or the size of the FFT (such as, the number of subcarriers) and therefore, the ratio between sampling frequency and size of FFT remains constant, (**col. 3, lines 38-58**);

“a scanner for scanning spectral bands of specified center frequencies, upon entering an area, to find a signal and to determine an operating channel bandwidth” (the receiver performs measurements on received signals and provides feedback to the transmitter to dynamically scale the operating characteristics of the channel, **Fig. 4**, col. 7, line 62 through col. 8, line 19); and

“a facility for adding to the subcarriers to widen the channel bandwidth for remainder of the communication” (scalable OFDM system including an OFDM receiver, **Fig. 4**, for adjusting the number of carriers to meet the desired transmission rate, **col. 3, lines 53-58; col. 6, lines 51-57**).

van Nee does not teach “a facility for sustaining a core-band for pertinent communications, wherein the core-band is not wider than smallest possible operating channel bandwidth of the network”.

Miyoshi teaches a receiver with a channel selecting section which allows only the control channel to pass (**Fig. 5, col. 3, lines 39-56**), and because the control channel can consist of just one subcarrier, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system (**Fig. 4, col. 2, line 64** through **col. 3, line 11**).

Miyoshi and van Nee are analogous art in that the both pertain to to adjusting variable bandwidth. It would have been obvious to one skilled in the art at the time the invention was made to use the control channel as taught in Miyoshi with the mobile station in van Nee in order to adapt to the variable bandwidth between the transmitter and receiver.

As to **claim 13**, van Nee in view of Miyoshi disclose all of claim 11.

Van Nee further discloses “the signal is a multi-carrier code division multiple access (MC-CDMA) or an orthogonal frequency division multiple access (OFDMA), and the signal is utilized with downlink, uplink, or both, where a duplexing technique is either Time Division Duplexing (TDD) or Frequency Division Duplexing (FDD)” (in a scalable OFDM system it was well known in the art at the time the invention was made that either TDD or FDD could be used on the uplink and/or downlink).

As to **claim 14**, van Nee in view of Miyoshi discloses all of claim 11.

Van Nee further discloses:

“the sampling frequency is a multiple of the sampling frequency of the fundamental range and the corresponding FFT/IFFT size is multiplied by a substantially same factor as the sampling frequency is multiplied by, to maintain time duration of the OFDM symbol structure; the FFT/IFFT size is maintained and the OFDM symbol duration is shortened accordingly; or the FFT/IFFT size is increased and the OFDM symbol duration is shortened accordingly” (the symbol duration is modified to double the signal bandwidth while not modifying the FFT length, **col. 3, lines 48-52**).

van Nee does not explicitly teach “the width of the core-band is less than or equal to a smallest bandwidth in the fundamental range”.

Miyoshi further teaches a receiver with a control channel consisting of just one subcarrier, and therefore, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system (**Fig. 4, col. 2, line 64** through **col. 3, line 11**).

It would have been obvious to one skilled in the art at the time the invention was made to use the control channel as taught in Miyoshi with the mobile station in van Nee in order to detect and adapt to the variable bandwidth between the transmitter and receiver.

As to **claim 15**, van Nee in view of Miyoshi discloses all of claim 11.

Van Nee further discloses ”the transceiver is a mobile station and the communication network is a wireless network of base stations and mobile stations” (the scalable OFDM system consists of mobile units and base stations, **Fig. 5; col. 2, lines 11-24**).

As to **claim 17**, van Nee in view of Miyoshi discloses all of claim 11.

Miyoshi further teaches “the transceiver uses the core-band during an initial communication stage and the operating bandwidth during normal operation, and wherein upon entering into an area, the mobile transceiver starts with the core-band and switches to the operating bandwidth for additional data and radio control subchannels” (mobile station's detects information on the control channel then the channel selecting component adjusts to the operating bandwidth specified by the base station, **Fig. 4-5; col. 3, lines 28-64**).

It would have been obvious to one skilled in the art at the time the invention was made to use the control channel in Miyoshi with the mobile station in van Nee in order to detect and adapt to the variable bandwidth between the transmitter and receiver.

As to **claim 18**, Miyoshi discloses a mobile station with an FFT (Fast Fourier Transform) facility (**Fig. 5** discloses an OFDM receiver with FFT component) configured to:

"divide a wide range of operating bandwidths into smaller bandwidth ranges, wherein a width of a predetermined band for basic system information communication is less than or substantially equal to the smallest operating bandwidth of any of the bandwidth range" (core band) composed of one subcarrier and the remaining subcarriers making up the data channel. Because the control channel can consist of just one subcarrier, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system (**Fig. 4, col. 2, line 64** through **col. 3, line 11; col. 3, lines**).

Miyoshi does not teach any of the remaining limitations of the claim.

van Nee teaches "a sampling frequency is a multiple of a sampling frequency of the lowest bandwidth range and the FFT is sized corresponding to the sampling frequency, to maintain time duration of an OFDM symbol structure; the FFT size is maintained and the OFDM symbol duration is shortened accordingly; or the FFT size is increased and the OFDM symbol duration is shortened accordingly" (the bandwidth can be adjusted by modifying the symbol duration while not modifying any other parameters, such as, FFT length; **col. 3, lines 48-52**).

"scan spectral bands, when entering an area, to determine the operating bandwidth upon detecting a signal in a spectral band (the receiver performs measurements on received signals and provides feedback to the transmitter to

dynamically scale the operating characteristics of the channel, **Fig. 4**, col. 7, line 62 through col. 8, line 19); and

“switch to the operating bandwidth by adding subcarriers to transmitting signals, wherein a specified number of subcarriers form a channel with a particular bandwidth” (scalable OFDM system with a transmitter and receiver that adjust number of carriers to meet the desired transmission rate, **Fig. 4; col. 3, lines 53-58; col. 6, lines 51-57; (col. 7, lines 9-25**).

Miyoshi and van Nee are analogous art in that they both pertain to adjusting variable bandwidth. It would have been obvious to one skilled in the art at the time the invention was made to use the receiver functions in van Nee with the mobile station in Miyoshi in order to adapt to the variable bandwidth in order to communicate with the transmitter.

As to **claim 20**, van Nee discloses a means for adjusting a mobile station bandwidth comprising:

“means for maintaining a fixed time-domain signal structure” ((transmission has a time structure, **Fig. 2, col. 6, lines 41-47**);

“means for maintaining a substantially constant ratio between a sampling frequency and a size of FFT (Fast Fourier Transform)” (the bandwidth can be varied in a scalable OFDM system by changing various parameters other than the sampling frequency or the size of the FFT and therefore, the ratio between sampling frequency and size of FFT remains constant, (**col. 3, lines 38-58**);

“means for adjusting the number of subcarriers or subchannels to scale the channel and attain a desired bandwidth’ (bandwidth can be varied by modifying the number of subcarriers, **col. 3, lines 53-58**); and

“means for scanning spectral bands of different center frequencies, detecting a signal in a spectral band of a center frequency, and determining the operating channel bandwidth of an area”. (the receiver performs measurements on received signals and provides feedback to the transmitter to dynamically scale the operating characteristics of the channel, **Fig. 4**, **col. 7, line 62 through col. 8, line 19**).

Van Nee does not teach “means for utilizing a core-band, substantially centered at an operating center frequency, for essential communications, wherein the core-band is not wider than smallest possible operating channel bandwidth of the network:

Miyoshi teaches a control channel (core band) composed of one subcarrier with the remaining subcarriers making up the data channel. Because the control channel can consist of just one subcarrier, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system. Additionally, the control channel is located at the center frequency of the transmit band of the data channel (**Fig. 4, col. 2, line 64** through **col. 3, line 11**).

Miyoshi and van Nee are analogous art in that they both pertain to multi-carrier transmission. It would have been obvious to use the control channel as taught in Miyoshi with the process in van Nee being that it speeds up switching between the control channel and the data channel as stated in Miyoshi, col. 1, lines 61-65.

As to **claim 21**, van Nee discloses a signal for wireless transmission comprising:

"subcarriers, wherein a specified number of subcarriers constitute a channel with a particular bandwidth" (scalable OFDM system that adjusts number of carriers for the desired transmission rate, **col. 3, lines 22-27**);

"a fixed time-domain signal structure" ((transmission signal has a time structure, **Fig. 2, col. 6, lines 41-47**); and a configuration wherein:

"a substantially constant ratio between a sampling frequency and a size of FFT (Fast Fourier Transform) and IFFT (Inverse Fast Fourier Transform) of the signal or a fixed spacing between adjacent subcarriers is maintained" (increasing the number of subcarriers for a constant sampling rate will increase the number of carriers while keeping the carrier spacing fixed, **Fig. 3, col. 6, lines 51-54**); and

"at least some of the subcarriers are added or subtracted to scale the channel and achieve a required bandwidth" (scalable OFDM system with a transmitter and receiver that adjust number of carriers to meet the desired transmission rate, **col. 3, lines 53-58; col. 6, lines 51-57**);

van Nee does not teach "a core-band utilized for radio control and operation signaling, where the core-band is substantially not wider than a smallest possible operating channel bandwidth of the system".

Miyoshi teaches a control channel (core band) composed of one subcarrier with the remaining subcarriers making up the data channel. Because the control channel can consist of just one subcarrier, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system. Additionally, the

control channel is located at the center frequency of the transmit band of the data channel (**Fig. 4, col. 2, line 64** through **col. 3, line 11**).

Miyoshi and van Nee are analogous art in that they both pertain to multi-carrier transmission. It would have been obvious to use the control channel as taught in Miyoshi with the process in van Nee being that it speeds up switching between the control channel and the data channel as stated in Miyoshi, col. 1, lines 61-65.

5. **Claims 6, 7, 8, 10 12 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **van Nee (US Patent No. 6,175,550)** in view of **Miyoshi (US Patent No. 7,372,909)** in view of **McGovern et al. (US PGPub 2002/0142777)** (hereinafter McGovern).

As to **Claim 6**, van Nee discloses a method comprising:

"maintaining a fixed time-domain signal structure" **Fig. 2, col. 6, lines 41-47**);

"maintaining a substantially constant ratio between a sampling frequency and a size of FFT (Fast Fourier Transform)" (the bandwidth can be varied in a scalable OFDM system by changing various parameters other than the sampling frequency or the size of the FFT and therefore, the ratio between sampling frequency and size of FFT remains constant, (**col. 3, lines 38-58**);

"adjusting a number of subcarriers or subchannels to scale a channel and attain a desired bandwidth" (bandwidth can be varied by modifying the number of subcarriers, **col. 3, lines 53-58**);

van Nee does not disclose “utilizing a core-band, substantially centered at an operating center frequency, for radio control and operation signaling, wherein the core-band is not wider than a smallest possible operating channel bandwidth of the network”.

Miyoshi teaches a control channel (“core band”) composed of a number of subcarriers which is less than the number of subcarriers composing the data channel and the control channel is located at the center frequency of the transmit band of the data channel (**Fig. 4**).

Miyoshi and van Nee are analogous art in that they both pertain to multi-carrier transmission. It would have been obvious to use the control channel as taught in Miyoshi with the process in van Nee being that it speeds up switching between the control channel and the data channel as stated in Miyoshi, col. 1, lines 61-65.

van Nee in view of Miyoshi also does not explicitly teach a configuration in which a mobile station “determines the operating channel bandwidth by a center-frequency-to-bandwidth-mapping; or decodes the bandwidth information provided to the mobile station via downlink signaling”.

McGovern teaches that a resource controller controls transmit and receive frequencies and generates a resource mapping message to the mobile station which specifies the width and center frequency of the channel to be used by the mobile station, **Fig. 4, ¶ 16-18, ¶ 27**).

McGovern and van Nee in view of Miyoshi are analogous art in that they pertain to dynamic channel bandwidth. It would have been obvious to one skilled in the art at the time the invention was made to use the mapping message as taught in McGovern

with the method in van Nee in view of Miyoshi being that it allows the transmitter to notify the mobile of the operating channel bandwidth and center frequency.

As to **claim 7**, van Nee in view of Miyoshi in view of McGovern discloses all of claim 6.

McGovern further discloses “the center-frequency-to-bandwidth-mapping employs a table look-up and the information provided to the mobile station via downlink signaling is in a broadcasting channel or preamble and is transmitted within the core-band” (in the case the information is provided in a downlink signal as in claim 6, the mobile discovers scans the broadcast channel, broadcast by the transmitter, for the channel list and selects a channel; the network equipment then sends the mapping message to the mobile station with inband signaling containing the operating parameters in the downlink signal, **¶ 16, 27**).

As to **claim 8**, van Nee in view of Miyoshi in view of McGovern discloses:

“the signal is a multi-carrier code division multiple access (MC-CDMA) or an orthogonal frequency division multiple access (OFDMA), and the signal is utilized with downlink, uplink, or both, where a duplexing technique is either Time Division Duplexing (TDD) or Frequency Division Duplexing (FDD)” (it was well known in the art at the time the invention was made that either TDD or FDD could be used on the uplink and/or downlink).

As to **claim 10**, van Nee in view of Miyoshi in view of McGovern discloses all of claim 6.

van Nee further discloses:

"the sampling frequency is a multiple of the sampling frequency of the fundamental range and the corresponding FFT size is multiplied by a substantially same factor as the sampling frequency has been multiplied by, to maintain time duration of the OFDM symbol structure; the FFT size is maintained and the OFDM symbol duration is shortened accordingly; or the FFT size is increased and the OFDM symbol duration is shortened accordingly" ((the symbol duration is modified to double the signal bandwidth while not modifying the FFT length, **col. 3, lines 48-52**); and

Miyoshi further discloses "the width of the core-band is less than or equal to a smallest bandwidth in the fundamental range" (Miyoshi teaches a control channel (core band) composed of one subcarrier and the remaining subcarriers making up the data channel. Because the control channel can consist of just one subcarrier, the size of the control channel would not be wider than the smallest possible operating channel bandwidth of the system (**Fig. 4, col. 2, line 64** through **col. 3, line 11; col. 3, lines 28-38**), and the fundamental range being simply a designated range from the division of the entire range).

As to **claim 12,** van Nee in view of Miyoshi disclose all of claim 11.

van Nee in view of Miyoshi do not disclose "the center-frequency-to-bandwidth-mapping employs a table look-up and the information provided to the mobile transceiver as downlink information is in a broadcasting channel or preamble".

McGovern discloses "the center-frequency-to-bandwidth-mapping employs a table look-up and the information provided to the mobile station via downlink signaling is in a broadcasting channel or preamble and is transmitted within the core-band" (the

transmitter transmits the available channel list on the broadcast channel which the receiver detects and uses to selects a channel for the transmission; the network equipment then sends the mapping message to the mobile station with in-band signaling, **¶ 16, 27**; it is implicit that the mapping information is sent in the preamble of the transmission).

McGovern and van Nee in view of Miyoshi are analogous art in that they pertain to dynamic channel bandwidth. It would have been obvious to one skilled in the art at the time the invention was made to broadcast the channel information as taught in McGovern with the method in van Nee in view of Miyoshi being that it allows the transmitter to notify the mobile of the operating channel bandwidth and center frequency associated with the transmission.

As to **claim 19**, Miyoshi in view of van Nee disclose all of claim 18.

Miyoshi in view of van Nee does not disclose "the operating bandwidth is by table look-up or down-link signaling”.

McGovern teaches the mobile scans the broadcast channel, broadcast by the transmitter, for the channel list and selects a channel; the network equipment then sends the mapping message to the mobile station with inband signaling containing the operating parameters in the downlink signal (**¶ 16, 27**).

McGovern and van Nee in view of Miyoshi are analogous art in that they pertain to dynamic channel bandwidth. It would have been obvious to one skilled in the art at the time the invention was made to broadcast the channel information as taught in McGovern with the method in van Nee in view of Miyoshi being that it allows the

transmitter to notify the mobile of the operating channel bandwidth and center frequency associated with the transmission.

Allowable Subject Matter

Claims 3, 4, 9 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA L. SEKUL whose telephone number is (571)270-7636. The examiner can normally be reached on Monday - Friday 8:00-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis West can be reached on (571) 272-7859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MARIA L. SEKUL
Examiner
Art Unit 4124

/M. L. S./
Examiner, Art Unit 4124

/Lewis G. West/
Supervisory Patent Examiner, Art Unit 4124